

Please type a plus sign (+) inside this box → ☐

PTO/SB/05 (4/98)  
Approved for use through 09/30/2000. OMB 0651-0032.  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No. \_\_\_\_\_

First Inventor or Application Identifier Firestone

Title System & Method for Collecting Vehicle Fees

Express Mail Label No. \_\_\_\_\_

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages ]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the invention
  - Brief Summary of the invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets ]
4. Oath or Declaration [Total Pages - a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 16 completed)
  - i. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

\* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

## ADDRESS TO:

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

5. ☐ Microfiche Computer Program (Appendix)
6. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
  - a. ☐ Computer Readable Copy
  - b. ☐ Paper Copy (identical to computer copy)
  - c. ☐ Statement verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

7. ☐ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R. § 3.73(b) Statement of Power of Attorney  
(when there is an assignee)
9. ☐ English Translation Document (if applicable)
10. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
11. ☐ Preliminary Amendment
12. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
13. ☒ \* Small Entity Statement(s) filed in prior application, Status still proper and desired  
(PTO/SB/09-12)
14. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
15. ☐ Other: \_\_\_\_\_

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_ Group / Art Unit: \_\_\_\_\_

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 17. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

or ☒ Correspondence address below

(Insert Customer No. or Attach bar code label here)

Name PAUL A. FIRESTONE

Address 88 CENTRAL PARK WEST

City NEW YORK State NY Zip Code 10023

Country \_\_\_\_\_ Telephone 212 799 7018 Fax 212 799 7018

Name (Print/Type) PAUL A. FIRESTONE Registration No. (Attorney/Agent) \_\_\_\_\_

Signature Paul A. Firestone Date 8/10/00

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

**STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR**

Docket Number (Optional)

Applicant, Patentee, or Identifier: Paul A. Firestone

Application or Patent No.: \_\_\_\_\_

Filed or Issued: 8/10/00

Title: System AND Method For Collecting Vehicle fees

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☒ the specification filed herewith with title as listed above.  
☒ the application identified above.  
☒ the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ No such person, concern, or organization exists.  
☐ Each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

Paul A. Firestone

NAME OF INVENTOR

NAME OF INVENTOR

NAME OF INVENTOR

Paul A. Firestone

Signature of inventor

Signature of inventor

Signature of inventor

Date

Date

Date

Patent Application of  
Paul A. Firestone  
88 Central Park West  
New York, New York 10023  
Citizen of the United States of America

## **SPECIFICATION**

### **TITLE OF INVENTION**

SYSTEM AND METHOD FOR COLLECTING VEHICLE FEES

### **CROSS-REFERENCE TO RELATED APPLICATIONS**

Not Applicable

### **STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT**

Not Applicable

### **REFERENCE TO A MICROFICHE APPENDIX**

Not Applicable

## BACKGROUND OF THE INVENTION

Federal, state and local road transportation and highway departments have depended in large measure on the use of collected tolls for road maintenance and construction.

The efforts to collect road-use fees at bridges and tunnels in the form of tolls has resulted in traffic back-up at tollbooths with adverse effects to the environment, personal safety, and business enterprise. In municipalities, the parking meter has served as a passive toll taker, but this method of fee collecting has not been fully successful. Evidence of this is the recent, trial innovation of print-out time-parking receipts which are to be placed on a vehicle's dashboard.

Parking meters have proved to have labor intensive costs. Ill-prepared meter readers have often written inaccurate license numbers and street locations. Arguments in face-to-face confrontations between meter readers and motorists is common. Coin box theft and severe damage to meters caused by automobiles and vandals demands expensive repairs and maintenance.

Under the current methods employed by authorized toll collection agencies, a motor vehicle operator must subscribe to a transponder-type fee collection system or queue-up to pay the required fee in cash. Utilization of the "cash-only" process necessitates a toll collector who must complete the collection which involves a time-consuming event adding to delays and traffic congestion and untoward accidents. Transponder-type fee collections have been largely unsuccessful since a majority of motorists do not subscribe to this type of system.

In the matter of parking meters, the motorist has often been unduly punished and the municipality cheated of revenue. False coins put into meters and pilfering, and destruction of coin boxes are serious problems with the unguarded equipment.

Inclement weather may preclude the meter man's/maid's attention to the routine surveillance assigned to them in street parking areas, and often times, hard-pressed, in the hastily written summons, the meter reader may incorrectly cite an erroneous vehicle license number, and location, and the infraction concerning metered parking.

In large municipalities, the capital investment in equipment for towing and the cost for maintenance of a storage area for towed cars added to the needed salaried personnel may make the towing of cars a money-losing proposition. The traffic problems caused by double-parking in certain congested business areas of a municipality and the caravans of huge delivery trucks moving through the streets and parking on both curbsides creates the difficulty of a single passage for traffic. The horde of leviathan trucks create the frenetic and hostile character of urban downtown business areas during daylight hours.

In municipalities, truck owners will receive fee-exemption credits if they utilize city streets during evening hours or can be afforded other incentives for time-sensitive vehicular activity.

Using proposed fixed and mobile scanning devices, this invention aims to construct a new and unique method for collecting road-use fees or tolls from all owners of registered vehicles regardless of the country or state that issued that vehicle's registration.

The invention relates to a method of collecting fees associated with vehicles for road usage wherein every vehicle contains its own unique identification code- similar or in concert with the known vehicle identification number (VIN)- comprised of a number, letter or symbol or combinations thereof.

Vehicle code readers (fixed or mobile) that transfer data to a central agency, or other appropriate means, are placed in selected area: entrances and exits to specified bridges, tunnels and highways. Municipalities will issue hand-held and auto-mounted vehicle-code-readers to police traffic managers who will in their normal course of activity scan designated streets to charge a fee for legal overnight parking, as well as for illegal double parking or standing, identifying the vehicle from its implanted I.D. code. The scanner is equipped to give full readings of date and time, and other relevant data as desired, to be programmed by the motor vehicle department, as well as the local police traffic manager. Traffic accidents can be immediately and easily recorded via the scanner and digital camera, verifying vehicle titles, insurance and the validity of licensed drivers. All these data can be instantly secured from stationery or mobile information capturing devices on moving or fixed I.D. codes.

Trucks and extended limousines can be assessed an additional road-use fee according to the number of axles and the approved laden weight, which incurs wear and tear of roads; and the limos will be assessed extended occupation of road and street space.

Most importantly, no current method provides for a passive, universal road-use system of collection of all vehicles.

The inventor is aware of the following U.S. Patents which show efforts made to solve some of the problems described above: 6,097,292; 6,075,466; 6,010,074; 5,969,641; 5,955,970.

## **SUMMARY OF THE INVENTION**

The invention proposes a new and novel method to collect fees for road use which fund costs for maintenance and construction of all highways, roads and city streets. It proposes a re-design of toll-collection that is to be more equitably shared by owners of all registered vehicles regardless of the place of registration issuance, in the United States, Canada and/or Mexico.

In addition, the current invention provides an instant method for monitoring vehicular regulatory compliance relating to insurance, emissions and exhaust, registration and title matters.

The instant invention relates to a cost-effective method of collecting vehicular related fees different from any current method, using a passive identification system similar to the UPC coding found in food and department stores, or the magnetic strip of a plastic credit card.

The office that issued vehicle registration will issue the vehicle's unique I.D. code and charge an appropriate amount to be held in an account against any and all road-usage charges and legal infractions associated with that vehicle's I.D. A periodic report containing identifications of time, place and fee charges can be sent to the title owner of the respective vehicle, and will note the account balance. If the title owner does not comply with the motor vehicle request, the standard delinquent response would follow.

All new vehicle manufacture will include the factory-installed I.D. codes in prescribed positions on the vehicle body.

According to the invention, each vehicle can be assigned a unique I.D. like a debit or credit card. The functioning of the scanner can be verified and/or modified at will by the appropriate personnel. It serves an important function beyond toll-taking. It will be programmed by the proper agencies to identify any vehicle that is unregistered, uninspected from emission control, operating without insurance, or in violation of any other conditions including the non-payment of charges or fees.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

The features of the present method which are believed to be novel are set forth by description within this application and may best be understood with reference to the accompanying drawings in which:

**FIG. 1** is a vehicle with attached or implanted I.D. codes provided by the motor vehicle registration office. It is implanted or aligned in multiple locations of the vehicle, to be designated by the appropriate authorities.

**FIG. 2** is a model of a road-side, standing scanner to be aligned at desired locations to identify vehicle's utilization of bridges, tunnels, highways and city streets.

**FIG. 3** is a suggested "manned" scooter that is easily maneuverable in traffic equipped with the I.D. scanners, digital cameras or other code information capturing devices.



## DETAILED DESCRIPTION OF THE INVENTION

A system and method for collecting vehicle fees wherein one or more unique I.D. code means, **FIG. 1, 1,2,3,4,5** and **6** are aligned so that the unique information can be easily captured and/or recorded by a scanning or other type of information collecting device, as in **FIG. 2**. The information capturing device **1, FIG. 2**, is strategically placed. It may also be in a fixed or mobile position **2**.

**FIG. 3** is a suggested use of the instant invention wherein a scooter **1** is fixed with I.D. code capturing equipment **2**, wherein the captured data is disseminated by scooter equipment or communicated by known means to a central database for review.

## CLAIMS

I claim as my invention:

1. A method for collecting vehicular related fees wherein:  
one or more I.D. code identifiers are placed on and/or about a vehicle, said identifiers corresponding to a series of unique characteristics associated with the vehicle and one or more desired set of characteristics and/or data, wherein, each I.D. may be identified for data retrieval and/or recording and/ or storing when positioned in proximity to I.D. readers (or code readers), wherein I.D (code) readers may be aligned to track and/or trace a variety of information relative to the existence of one of more identifiers wherein said I.D (code) readers include the collection of desired data relative to the proximity of identifiers to identifier readers (code readers).

- 000T20" 129E960
2. A method and system for collecting road-use fees, comprising:  
one or more passive signaling devices aligned to a vehicle so as to identify the road-use fee for such a vehicle, said signaling device to include a unique numeric or alpha numeric, or other unique identifying feature, or code, associated with the registered owner of the vehicle, said passive signaling devices positioned in desired proximity to record and monitor road-use, said monitors comprising a mechanism capable of recording and/or otherwise documenting the existence, proximity, duration, and/or other desired monitoring of events, from a desired position, the system of which results in the monitoring and processing of the data.
  3. A system and method for collecting vehicle fees wherein:  
vehicles are aligned with readable identification means (passive or active) while said vehicles are moving or still;  
wherein, capturing means are aligned to track and process the unique I.D. means within a proximity and/or condition desired to be monitored;  
wherein, the collected information provides a mechanism to allow the charging of vehicle related road-use fees as desired.

## **ABSTRACT OF THE DISCLOSURE**

The invention proposes a new and novel method to collect fees (or tolls) for road-usage and to make toll-booths unnecessary and obsolete. Monies thus collected by this invention can be used for maintenance and construction of all highways, bridges, tunnels, roads and city streets. The invention re-designs the method of toll-collection which insures a more equitable sharing by all owners of vehicles who use these roads under a variety of conditions.



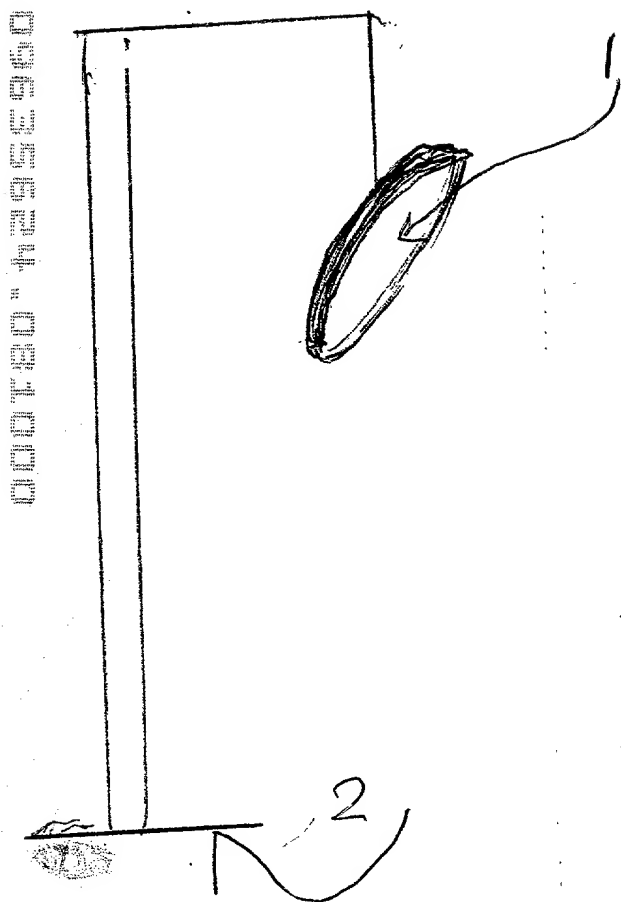


FIG. 2

000T80-4295950

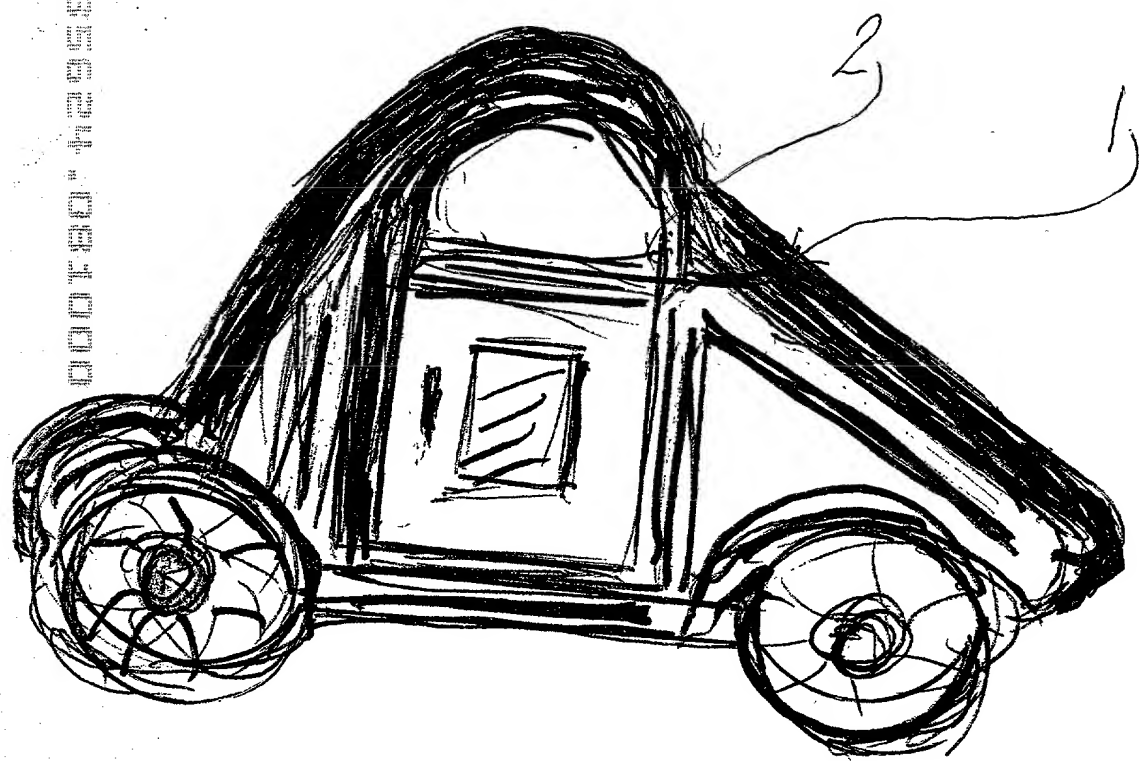


FIG. 3

Please type a plus sign (+) inside this box → ☐

PTO/SB/01 (12-97)  
Approved for use through 9/30/00. OMB 0651-0032  
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

<b>DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)</b>  <input checked="" type="checkbox"/> Declaration Submitted with Initial Filing      OR <input type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)	<b>Attorney Docket Number</b>	
	<b>First Named Inventor</b>	Paul A. Firestone
	<b>COMPLETE IF KNOWN</b>	
	<b>Application Number</b>	/
	<b>Filing Date</b>	
	<b>Group Art Unit</b>	
	<b>Examiner Name</b>	

**As a below named inventor, I hereby declare that:**

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

System AND method for Collecting Vehicle Fees

the specification of which (Title of the Invention)  
☒ is attached hereto  
OR  
☐ was filed on (MM/DD/YYYY) [ ] as United States Application Number or PCT International Application Number [ ] and was amended on (MM/DD/YYYY) [ ] (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)

☐ Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 0.4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/01 (12-97)  
Approved for use through 9/30/00. OMB 0651-0032  
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## DECLARATION — Utility or Design Patent Application

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

☐ Customer Number

OR

☐ Registered practitioner(s) name/registration number listed below

Place Customer  
Number Bar Code  
Label here

Name	Registration Number	Name	Registration Number

☐ Additional registered practitioner(s) named on supplemental Registered Practitioner Information sheet PTO/SB/02C attached hereto.

Direct all correspondence to: ☐ Customer Number or Bar Code Label  OR ☒ Correspondence address below

Name	PAUL A. FIRESTONE				
Address	88 CENTRAL PARK WEST				
Address					
City	NEW YORK	State	NY	ZIP	10823
Country	US	Telephone	212 799 7018	Fax	212 799 7018

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle [if any])	Family Name or Surname
PAUL A.	FIRESTONE

Inventor's Signature	Paul A. Firestone			Date	8/10/00
Residence: City	NEW YORK	State	NY	Country	US
Post Office Address	88 CENTRAL PARK WEST				
Post Office Address					
City	NEW YORK	State	NY	ZIP	10023
Country	US				

☐ Additional inventors are being named on the supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto



To the Commissioner of Patents and Trademarks:

Your petitioner, Paul A. Firestone, citizen of the United States of America, and resident of New York, New York, whose post office address is 88 Central Park West, New York, New York 10023, respectively prays that the accompanying:

**PETITION TO MAKE SPECIAL**

(and Declaration) be fully considered and approved, and that letters patent may be granted for the **SYSTEM AND METHOD FOR COLLECTING VEHICLE FEES** as set forth in the following specification:

**FIG. 1** is a front view illustrating the novel **SYSTEM AND METHOD FOR COLLECTING VEHICLE FEES**.

What is claimed:

**SYSTEM AND METHOD FOR COLLECTING VEHICLE FEES**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Paul A. Firestone

**Group Art Unit:**

**Serial Number:**

**Examiner:**

**Filed:** August 10, 2000

**For:** SYSTEM AND METHOD FOR COLLECTING VEHICLE FEES

Commissioner of Patent and Trademarks  
Washington, D.C. 20231

**PETITION TO MAKE SPECIAL**

Sir:

I respectfully request that my patent application for a SYSTEM AND METHOD FOR COLLECTING VEHICLE FEES be made special as the application puts forth that:

**I am over the age of 65 (birthdate: August 14, 1922);**

**Environmental quality will be enhanced; and,**

**Energy savings will result.**

Attached is a Declaration in Support of this Petition to Make Special.

- Very Respectfully,



Paul A. Firestone  
88 Central Park West  
New York, New York 10023  
212-799-7018 tel/fax

000780-4222950

[illegible]

**Filed:** August 10, 2000

**For:** SYSTEM AND METHOD FOR COLLECTING VEHICLE FEES

## **DECLARATION IN SUPPORT OF PETITION TO MAKE SPECIAL**

- 1. I am over the age of 65 (birthdate: August 14, 1922)**
- 2. Environmental quality will be enhanced**
- 3. Energy savings will result.**

In support of the accompanying Petition to Make Special, petitioner-applicant declares:

1. I am the applicant in the above referenced patent application and am over the age of 65.
2. The use of the instant invention will enhance the quality of the environment as the use of said method will result in less vehicular movement which will lessen the depletion of natural resources and reduce toxic vehicle emissions which will result in the heightened quality of air and water.
3. Said invention will result in energy savings, mostly fossil fuels, as the instant device and method results in a reduction of toxic tailpipe emissions from motor vehicles
4. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

Paul C. Jurestine

Paul A. Firestone 8/10/00

212-799-7018 tel/fax

## SEQUENCE LISTING

Not Applicable

[illegible]